WHAT IS CLAIMED IS:

1. A frequency divider comprising:

an input frequency divider for generating an intermediate signal having a frequency of f_i from an input signal having a frequency f_{in}, wherein $f_{in}=Rf_I$, R being an integer >1;

an edge counter that generates a value equal to the number of edges in said intermediate signal that have occurred since a reset signal was generated; and

an output generator that generates an output signal when said edge counter value reaches a value Q and generates said reset signal.

2. The frequency divider of Claim 1 wherein R=1.

3. The frequency divider of Claim 1 wherein said edge counter comprises a positive edge counter that generates a positive count value equal to the number of positive going transitions in said intermediate signal since said reset signal; a negative edge counter that generates a negative count value equal to the number of negative going transitions in said intermediate signal since said reset signal; and an adder that generates the sum of said positive count and said negative count.

4. The frequency divider of Claim 1 wherein said output generator further comprises a port for receiving a signal specifying Q.